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On

Cholera Infantum

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By

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C H O L E R A I N F A N T U M

Cholera is a disease of the summer season, and from the universality of its appearance at this time, has acquired the popular name of the summer complaint, or the second summer complaint; It is also in some places, vulgarly termed, the puking and purging of infants. This is one of the most troublesome diseases, with which the physicians of the United States, are called to contend, and is productive of considerable mortality. It prevails principally in our large cities, more particularly among the poor, who are confined to warm, and ill ventilated places, and are not particular with respect to diet, clothing &c. Children are liable to attacks, about the second summer, but no age from the second week, to the second year, is exempt from it, tho' it seldom happens after this period.

Considering the immense fatality of this disease, it is one, which deserves our most particular attention, and it is somewhat remarkable, that it has been so much neglected, by the practitioners of the United States. I need scarcely acknowledge, my inability, to supply this defect; nor shall I attempt it; all that I can do, is to give such a history of this disease, as will be conformatory of the views, entertained by some of our most enlightened practitioners.

History. Cholera is most usually ushered in, with a violent vomiting and purging, attended with high fever; tho' it very commonly commences, with a diarrhoea, which continues several days, without any other symptom of indisposition. The substance discharged by vomiting is either yellow, or green, or nothing more than mucus, mixed with the contents of the stomach; The stools are sometimes yellow, but more frequently green, white, brown or black, or a com-

loration of these colours; in some instances they are nearly as limpid, as water. The evacuations are frequent, tho' the faeces are in a great measure retained, as in dysentery; but not to so great an extent as in this disease, as small portions of faecal matter are discharged in almost every stool. They are seldom large in quantity, unless very thin and sometimes without smell; but generally very offensive, smelling as Dr Jackson expresses it, like the water, in which putrid meat has been washed. The proper faecal smell is always wanting in confirmed Cholera. Digestion is very much impaired in this disease, in consequence of which lumps of undigested matter are discharged in almost every stool; worms are sometimes evacuated in each kind of stool, which has been described. The pain at this stage of the complaint is exceedingly severe; The child draws up its feet, throws its hands about, sometimes pulls its ears, rubs its nose and eyes, and cannot remain

still for a moment in any posture: The little patient moans in his sleep, and not unfrequently by screams out. The appetite is entirely lost, or is irregular, craving only certain articles of food, and changing in a whimsical manner. The child is sometimes very uneasy after taking food, and frequently rejects it, but this happens more frequently with liquids, as intense thirst attends every stage of this disease, and they are not only swallowed voraciously, but in immense quantities if permitted by the nurse. The pulse is generally quick and weak, though it is sometimes full, strong and active. The fever is of the remittent kind, and discovers evident exacerbations. In every case of this complaint, there appears to be a great determination to the head, which is indicated, by its being unusually hot, flushed face, and in some instances by the redness of the eyes; this exists sometimes to so great a degree, that symptoms of delirium are not

only produced, but of mania; and I have seen one case which very much resembled Hydrocephalus. A swelling of the abdomen and extremities frequently occurs, at this stage of the complaint. The eyes are sunk in their sockets, glassy, and covered with a thick film, and the child generally sleeps with them half closed; the cheeks fall in and the lips assume the shriveled appearance of old age. Such is the insensibility of the system, in some cases of this disease, that flies have been known to alight on the eye, whilst open, without exciting any motion in the eyelids to remove them.

The duration of this disease is very various; if timely aid be not given, it generally proves fatal in a few days. Dr. Rush in his treatise on Cholera, mentions that he once saw a case, which terminated fatally, in twenty four hours. Such cases as this, are extremely rare, the most violent seldom terminating, in less than ten or fourteen days;

tho. This disease is generally protracted for a month or two, with occasional variations. The temperature of the weather has a great influence on its duration; a cool day generally abates its violence, and disposes it to a favourable termination. But when the disease has continued for some time, it is often obstinate, and attended with several distressing circumstances: The little patient is very much emaciated, so much so, in some cases, that the bones protrude through the skin, livid spots appear on different parts of the body and the mouth becomes aphthous; and probably from this cause and muscular debility, the little sufferer is unable to swallow more than a few drops of some liquid at a time. The fatal termination is generally preceded by singultus, coma and convulsions.

Causes. The predisposing cause of this disease is the debility occasioned by the warmth and

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impurity of the atmosphere during the summer season. It is excited into action by frequent changes from heat to cold, and from dryness to humidity, improper food, clothing, worms &c. The fruits of the season are a prolific source of this disease; and dentition which was formerly said to produce this disease, is now generally ranked among the exciting causes.

Appearances on dissection. These clearly reveal to us, the nature and true seat of Cholera. It expends its whole force on the contents of the abdomen. The mucous membrane of the stomach and intestines has been found affected in every case. Small spots are to be seen in this (the lining membrane of the stomach) which are of a red, inclining to a purple colour. Spots of a similar nature, but of somewhat a larger size are likewise observable in the mucous membrane of the duodenum and other small intestines. In the peritoneal

coat of the stomach and intestines, there are small livid spots corresponding with those in the mucous membrane; but the peritoneum has seldom or never been found diseased in any other part. No morbid appearances have been discovered in the large intestines, unless dysenteric symptoms have existed. The Liver has generally been found enlarged, and sometimes to so great a degree, as to occupy two fifth's of the cavity of the abdomen: no other mark of disease has been discovered; except in a few cases, it has been found rather more firm and solid than natural. The gall bladder presents no peculiar appearances, more than it has sometimes been observed, distended with dark green bile, and at other times with bile paler than natural. The spleen and pancreas are rarely affected and therefore cannot present any appearances more than natural.

Treatment. Having given the History

causes and appearances on dissection, I next proceed to the treatment. Cholera, as I before mentioned, commences with a disordered state of the alimentary canal, and hence our earliest endeavours, should be directed to the stomach and bowels. The propriety of this practice, is admitted on all sides, but there exists great diversity of opinion, respecting the proper course to be pursued. I shall not enter into a discussion relative to the propriety of any one practice, but shall lay down that which has succeeded best, under my own immediate observation, and that of some very respectable practitioners.

In the mildest forms of this disease, or those in which diarrhoea is the most prominent symptom, mild purges will generally answer every purpose, and will frequently effect cures, without the assistance of any other remedies. Calomel or castor oil, are generally selected for this purpose.

In more violent cases of this complaint

attended with vomiting not violent, the same remedies will answer;; but we must first allay the irritability of the stomach, by such remedies, as are usually resorted to, to affect this purpose. Those which I have found to answer best, are lime water and milk, clove tea, anodyne enema ta, the spice plaster, warm bathing; and if these fail a blister should be applied to the region of the stomach. The irritability of this organ being calmed, the next indication which presents itself, is to evacuate the stomach and intestines, of their acrimonious and offensive contents. Calomel is well calculated to fulfil this indication. This should be given in the dose of one or two grains, and two, or three hours afterwards, a dose of castor oil should be administered. These should be repeated several days successively until the stools resume a more healthy appearance. This practice conjoined with, other auxillia ry means, which I shall presently detail, consti-

tutes one, which has proved very efficacious, in every case, in which I have tried it. Dr. Klapp mentioned, in one of his clinical lectures at the alms house, that this was the practice which he pursued, in the treatment of this complaint, and that it had proved successful in almost every case, which had fallen under his care.

There is another mode of administering the calomel, which has proved equally efficacious in the several cases in which I have used it. In a conversation with Dr. Hodge sometime in July, I enquired of him, what plan of treatment he generally pursued in combatting this disease. He informed me that he had treated very successfully almost every case which had fallen under his care, that season, by the use of calomel, in the dose of the eighth of a grain repeated every hour or two during the day, and administering a dose of oil at bed time; he further observed, that the two or three first doses

complete success, in almost every case. It must however be mentioned, that the same antiemetic measures, which I mentioned above, should be resorted to, if the vomiting be violent. The modus operandi of this medicine appears to me, to be sufficiently evident; by keeping up a slight discharge from the stomach and bowels, it gives tone to them; it also restores the liver to its healthy state, and thus causes it to resume its healthy action, in its office of secretion.

Altho the practice which I have detailed will, for the most part, prove successful, still there is another, which is better adapted to certain cases. When the disease is ushered in with great gastric distress, attended with violent vomiting and purging, griping, thirst &c, it cannot be denied but that, this is owing to some acrimonious substance contained in the stomach; admitting this to be a fact, the indication is plain, that by removing this, we at once arrest the progress

of the disease. To fulfil this indication, an Emetic should be administered, and Specac is selected for this purpose. This practice is generally thought hazardous, but why, I cannot tell, and as I have the high authority of Dr. Chapman in support of it, I should not hesitate to resort to it in every such case, which should fall under my observation. They free the stomach of its acrimonious contents, impart tone to that organ, and hence prevent the recurrence of vomiting. Emetics do still more; They determine to the surface and thus equalize excitement. But when there is extreme debility they are inadmissible.

After having evacuated the stomach, we must next resort to purgatives; Of these calomel has the preference. This may be given alone or in combination with opium, if the stomach be very irritable. The dose of the calomel in this case, is two or three grains, followed by a dose of castor oil. In combination with opium, it is calculated

to fulfil two very important indications, in the treatment of this disease; first, to allay the irritability of the stomach and intestines; and secondly to evacuate the alimentary canal. This is certainly a very valuable combination, and is recommended by almost every author, that I have consulted on this subject. Epsom Salts is a very valuable purgative in this disease, as it possesses some peculiar property which enables it to remain better on the stomach, than any other, with which I am acquainted. The purges as I mentioned above should be continued, until the stools assume, their natural appearance.

In Cholera, as every other bowel affection, accompanied, with fever, V. Section is imperiously demanded and should never be overlooked. If the pulse be full strong and active, we should always have recourse to the lancet. Dr Chapman in his lecture on Cholera mentioned, that it was customary with him, to bleed several times in this disease.

and uniformly with unequivocal utility. But the lancet, as he very justly observes, should be regulated, by a sound and discriminating judgment.

In this complaint, as I mentioned before, different parts of the body, are frequently affected with intense heat, and considerable inequality as respects this heat, is often observable, whilst some parts are intensely hot, others will be of their natural temperature, or incline to be cold. The indication, which here presents itself, is to equalize the excitement of the body. To fulfil this, those means should be resorted to, which have a tendency, to excite the capillary vessels in other parts of the system. Warm bathing is well calculated to effect this purpose. The patient should be placed in a bath, from 90° to 100° Fahrenheit, just before going to bed, and should remain in it, six or eight minutes; after which he should be taken out, wiped perfectly dry, well rubbed and

put to bed. If the head or breast, which is very commonly the case, be very warm, they should be sponged with vinegar and cold water, or bladders of ice should be applied to these parts. Rubefacients are recommended by some, as conducive to the same end as the warm bathing. They may be applied to the extremities when cold, or when the circulation is languid, with considerable benefit. They may also be applied to the abdomen with the same prospect of success. Blisters are very serviceable in the low stages of this disease, attended with griping, and should never be overlooked in practice.

When the patient is extremely debilitated, unable to take or digest much nourishment, wine whey is a valuable auxiliary to the warm bath. Milk punch may be substituted for this if the patient be unable to procure wine of the best quality; but wine is preferable to brandy, when it can be obtained pure, or when it does not sour on the stomach.

When the stomach and intestines are very irritable, acrid injections, (such as, a solution of salt in water to which a little molasses may be added) are said, by Dr. Klapp to calm this irritability, and compose the system, better than any other means, with which he is acquainted. These should be repeated every two or three hours during the day, so as to keep up a constant discharge from the bowels. They are also well calculated to overcome, that insatiable thirst which attends every stage of this disease. Injections of lard, or fresh butter, are well adapted to such cases, as above mentioned attended with griping. Anodyne injections judiciously administered, are very serviceable: as a general rule Opium in no shape should ever be given, only when the bowels have been recently evacuated, or in combination with some purgative.

When the stomach is so weak and irritable, as to retain neither medicine, nor nutriment, proceeding in a great measure from debility, injections of

the infusion of bark, are very serviceable.

After the disease has continued for several days, and the most violent symptoms are subdued, frequently there will remain nothing more than a simple diarhaea, tho attended with profuse discharges. Those remedies, which are calculated to lessen the frequency of these discharges, should be resorted to. Astringents are well adapted to this case, and usually had recourse to. Of the mineral astringents, alum is generally prefered. This should be given in minute doses, in combination with opium; one or two grains of alum, to a fourth or eighth of a grain of opium, to be repeated several times a day. Saccharum Saturni is also said by Dr. Caldwell, to be advantageously employed in this case This is administered in the same manner as alum

Of the vegetable astringents, a decoction of logwood and pomegranate peel, is much used, particularly by the practitioners of this city. angustura bark and Columbo, are sometimes beneficially

employed, at this stage of the disease; they may be administered in decoction or infusion. The infusion of P. Bark will sometimes answer extremely well. The most efficacious, however, is a decoction of the dewberry root. The root of this plant, is agreeably aromatic, and powerfully astringent, and hence is particularly applicable to the Cholera of Children.

After all, however the only effectual remedy will be to remove the patient to the country, for it is almost impossible for us to effect a permanent cure, so long as the child remains exposed to the operation of its causes; relapse, on relapse will take place till the child exhausted, by repeated attacks, will sink under the disease. It is now generally admitted that this, is the most successful plan of treatment, not only as a preventative, but as a curative measure, and should always be adopted when the circumstances of the patient will permit. Much advantage will be derived from sending the patient to the country, at any stage of this complaint.

Dr Rush in his treatise on Cholera informs us, that out of many hundred patients, with whom he adopted this plan of treatment, he never lost more than two or three; and he further observes, that he saw one cure performed, after convulsions had taken place. If this measure cannot be adopted, the patient should be carried out of town, in a carriage, ~~or~~ on horseback several times a day, and should always be exposed to the country air, as much as possible, in good weather. It may also be exposed to the air of the river, and especially to the motion of a boat, several times a day.

I shall conclude my remarks, on the treatment of this disease, by making a few observations, respecting the proper regimen to be pursued, as little will our remedies avail, unless proper regard be paid to this.

It has been a question, whether the milk of the nurse is preferable to other kinds of nutriment, when children are affected with this disease; but this question is now unanimously answered in the affirmative.

This will be found most grateful to the little sufferer, most easily retained by the stomach, and more easily digested, than any other food, with which we are acquainted: Therefore it should be held as a maxim, in the treatment of Cholera, that no other sustenance should be allowed, where the child is not weaned. But it frequently happens in practice, that we meet with children, who do not nurse, and then it becomes necessary, to resort to some other nourishment. In such cases we should select something, which has the greatest similarity, to the milk of the human female. The milk of the cow, is prefered by the generality of practitioners, and in order to prevent any evil consequences, it is directed to be used only when fresh; This may often be rendered more suitable by combining it with lime water, and if there be profuse liquid discharges this mixture should be boiled. The farinaceous preparations are very suitable articles of diet, and in some cases are preferable to milk; such as rice, barley water, Tapioca, Panado, Sago, arrow root, cracker water &c. These should always be used in the liquid state, and sweetened with the best refined loaf sugar. Decoctions of ani-

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mal food, may sometimes be employed, when neither milk nor the farinaceous articles can be borne. Fat bacon, salted herring, butter and cheese are allowed by some very respectable practitioners, but whether these are applicable or not I am unable to determine; as I have never seen them used in more than one or two cases; but in these, they were attended with injurious effects.

As much caution is requisite with respect to the drinks, as the food employed; they should generally be neither acid, nor acescent; but some latitude is allowable in the use of the latter, as they are sometimes not only grateful, but even serviceable.

It is also of considerable importance, to attend to the administration of these articles: the quantity taken at once should be small, for the stomach in this debilitated state cannot perform its office, if overloaded, whatever need of nourishment may be felt by the rest of the system. The frequency of administration should always have reference to the quantity. As a general rule, not more than a teaspoonful should be allowed at a time, which should be repeated every twenty or thirty minutes, according to circumstances.